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Soviet Forces and Capabilities for Strategic Nuclear Conflict Through the Mid-1990s

National Intelligence Estimate
Key Judgments and Executive Summary

~~Secret~~

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April 1986

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THE NATIONAL FOREIGN INTELLIGENCE BOARD CONCURS, EXCEPT AS NOTED IN THE TEXT.

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NIE 11-3/8-86

SOVIET FORCES AND CAPABILITIES FOR STRATEGIC NUCLEAR CONFLICT THROUGH THE MID-1990s

KEY JUDGMENTS AND EXECUTIVE SUMMARY

Information available as of 24 April 1986 was used in the preparation of this Estimate, which was approved by the National Foreign Intelligence Board on that date.

KEY JUDGMENTS

By the mid-1990s, nearly all of the Soviets' currently deployed intercontinental nuclear attack forces—land- and sea-based ballistic missiles and heavy bombers—will be replaced by new and improved systems. Most of these are already in production or in flight-testing. Improved Soviet heavy ICBMs will increase the already formidable Soviet counterforce capabilities; mobile ICBMs and quieter SSBNs with long-range missiles will enhance force survivability and endurance; new bombers and cruise missiles will add diversity to the aerodynamic threat. An increasing proportion of Soviet intercontinental attack warheads will be deployed on SSBNs and mobile ICBMs, with a lower proportion in fixed silos. The number of deployed intercontinental nuclear warheads will increase by a couple of thousand by 1990, with the potential for greater expansion in the 1990s. We are especially concerned about the Soviets' longstanding commitment to strategic defense, including their extensive program to protect the leadership, their potential to deploy widespread defenses against ballistic missiles, and their extensive efforts in directed-energy weapons technologies, particularly high-energy lasers. The vigorous Soviet effort in strategic force research, development, and deployment is not new, but is the result of an unswerving commitment for the past two decades to build up and improve strategic capabilities.

The Soviets do not endorse mutual vulnerability—nor, for that matter, mutual survivability—as a desirable basis for establishing or preserving strategic stability. The USSR, no less than the United States, appreciates the tremendous destruction a strategic nuclear war would entail and thus strongly seeks to avoid such a conflict. The Soviets want to deter their adversaries from attacking the USSR, and from interfering with Soviet political and military initiatives. They are convinced that the best means to do this, and to provide for the contingency that strategic nuclear conflict could nevertheless occur, is to build forces that offer the greatest prospect of limiting damage to their society and prevailing over their adversaries in a nuclear war. The Soviets have persistently tried to alter the strategic balance in their favor.

The Soviets' appreciation of the persistent risk of all-out nuclear war sustains a commitment to meet requirements for effectively fighting it. They take a sober view of their prospective adversaries' capabilities and programs, but do not simply try to tailor their programs closely to specific future threats that may be variable and uncertain. They seek to deploy, as technology and resources permit, a wide array

of systems to meet broad, standing requirements that they deem militarily prudent for the complex task of waging nuclear war. Thus, in the past decade they have expended much effort to improve the countermilitary capabilities of their offensive forces, especially ballistic missiles, and the survivability and endurance of their forces, leadership, and command and control.

We believe the Soviets are determined to increase their strength relative to the United States or, at a minimum, to prevent any significant erosion of the military gains the USSR has made over the past decade. They recognize that new US strategic systems being deployed or under development will increase the vulnerability of their silo-based ICBM force, complicate their antisubmarine warfare (ASW) efforts, and present their air defense forces with increasingly complex problems. By their actions and propaganda, the Soviets have demonstrated that they are very concerned about the US Strategic Defense Initiative (SDI). Soviet leaders view arms control policy as an important factor in preserving past strategic gains and achieving further strategic advantages. They will try to use the arms control arena as a means of delaying or undercutting the US SDI program and slowing other US programs.

We have considered the question of whether their economic and technological difficulties may force the Soviets to slacken their strategic force efforts and reduce their long-term competitiveness in this field. Despite serious economic problems since the mid-1970s, the Soviets have continued to procure large quantities of new strategic weapons. Strategic forces, more than any other single element of power, are the foundation of Soviet superpower status. While the Soviets are attempting a major restructuring of their industrial production capability, we do not believe that economic considerations alone would lead them to abandon major strategic weapon programs, to forsake force modernization goals, or to make substantial concessions in arms control.

The evidence shows clearly that Soviet leaders are preparing their military forces for the possibility that they will actually have to fight a nuclear war. We judge that the Soviets would plan to conduct a military campaign that would seek to end a nuclear war on their terms—by neutralizing the ability of US intercontinental and theater nuclear forces to interfere with Soviet capabilities to defeat adversary forces in Eurasia and dominate that area, while preserving the ability of the Soviet state to survive and recover.

The Soviets place demanding requirements on the capabilities of their strategic forces to wage war effectively. They are likely to rate their capabilities as lower in some areas than we would assess them to

be, and they are probably pessimistic about the implications of ongoing US strategic modernization programs. For example, significant improvements in US strategic offensive forces and in command, control, and communications capabilities will occur over the next 10 years, and sizable US, as well as Soviet, forces would survive large-scale nuclear strikes. Although we do not have specific evidence on how the Soviets assess their prospects in a global nuclear conflict, we judge that they would not have high confidence in the capability of their strategic offensive and defensive forces to accomplish their wartime missions, particularly limiting the extent of damage to the Soviet homeland.

The Soviets' lack of high confidence and their appreciation of the destructiveness inherent in nuclear conflict would probably inhibit them in peacetime from deliberately risking a direct clash with the United States or its NATO Allies. Avoiding further escalation, however, would not be their sole concern, should they get involved in a major conventional war with the United States and its Allies. In these circumstances—where they would expect the risks of nuclear war to be high—the Soviets would also consider that, by failing to seize the initiative should all-out nuclear war appear imminent and unavoidable, the USSR could suffer both greater damage and a reduction in its chances for eventual combat success. The likelihood of the Soviets' initiation of nuclear strikes would increase if they suffered a major strategic reversal on the battlefield. If they possessed convincing evidence that NATO or the United States was about to launch a large-scale nuclear strike, they would attempt to preempt. For reasons such as lack of convincing evidence, they might not mount a preemptive attack. They are improving their capabilities for riding out an attack and retaliating, and they have the capability to launch forces quickly, upon receipt of warning that an ICBM attack is under way.

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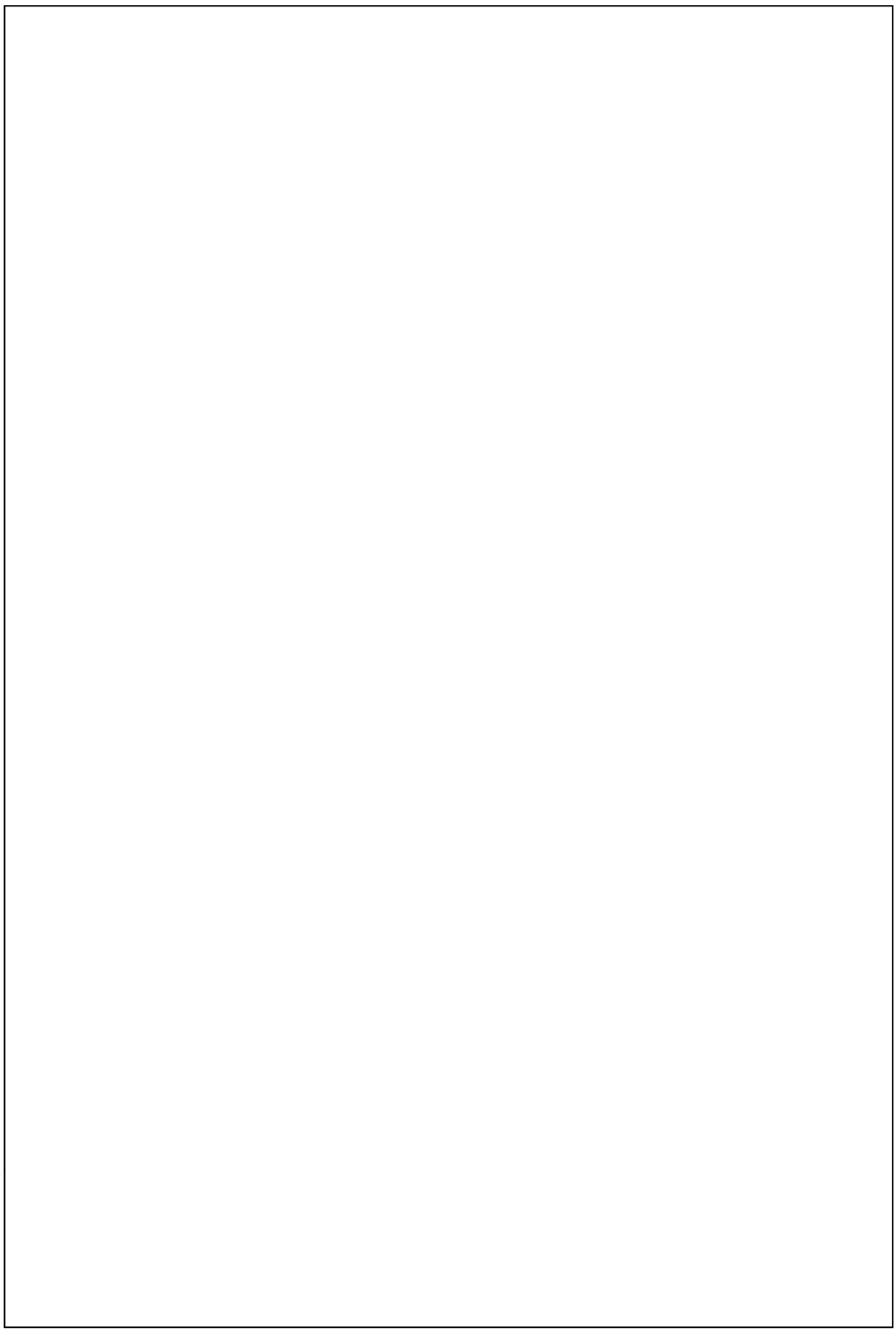
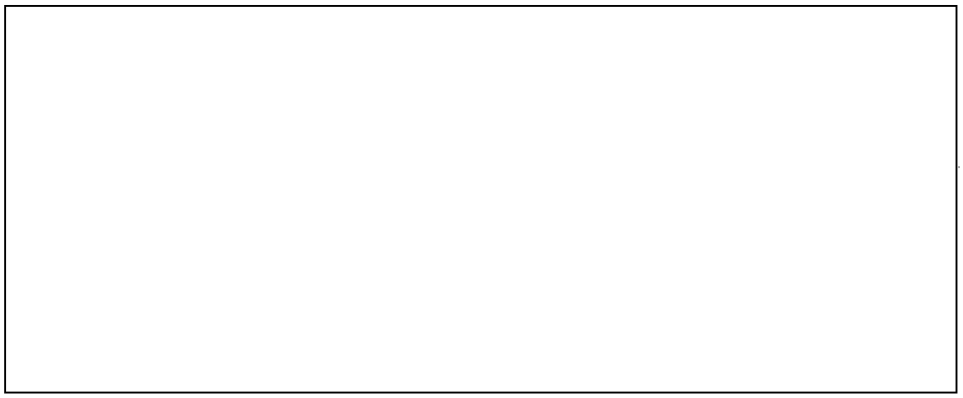




EXECUTIVE SUMMARY

Strategic Offensive Forces

1. All elements of Soviet strategic offensive forces will be extensively modernized by the mid-1990s. While the Soviets will continue to rely on fixed, silo-based ICBMs, mobile ICBMs will be deployed in large numbers (see figure 1), and major improvements will be made to the sea-based and bomber forces. The major changes in the force will include:

— An improved capability against hardened targets through further improvements to the heavy ICBM force.

— Significantly better survivability from improvements in the submarine-launched ballistic missile (SLBM) force—through quieter submarines and longer range missiles—and deployment of mobile ICBMs. Mobile ICBMs will also improve the Soviets' capabilities to use reserve missiles for reload and refire.[1]

— An increase in the number of deliverable warheads for the bomber force and in its diversity, as a result of the deployment of new bombers with long-range, land-attack cruise missiles.

— Deployment of a variety of new long-range, land-attack cruise missiles.

ICBMs

2. The ICBM force, as shown in figure 2, will have been almost entirely replaced with new systems by the mid-1990s:

— The Soviets are preparing to deploy the SS-X-24 in a rail-mobile mode in 1987. Evidence indicates a follow-on, similar in size and payload but probably with greater range, is likely to begin testing in about 1987. We expect SS-X-24–class ICBMs equipped with 10 multiple independently targetable reentry vehicles (MIRVs) to replace the MIRVed SS-17 and SS-19 silo-based ICBMs, which carry fewer warheads. An alternative view holds that the future of the SS-X-24 program is unclear, and that an SS-X-24 follow-on will begin flight-testing in about 1989.[2]

— Within the last year, the Soviets deployed 72 launchers at eight bases for the road-mobile SS-25. We have detected several other bases under construction, and we expect some 400 to 500 launchers by the early 1990s. A follow-on, which we judge will have single- and three-RV payload options, will probably be flight-tested in 1987. Soviet commitment to mobile ICBMs represents a major resource decision; such systems require substantially more support infrastructure than do silo-based systems, and thus are much more costly to operate and maintain.

— The Soviets have retired older silo-based single-RV SS-11s as they have deployed the single-RV road-mobile SS-25.

— A new silo-based heavy ICBM, to replace the SS-18, with improved capabilities against hardened targets, is beginning its flight test program.

SLBMs

3. An extensive modernization program will result in replacement of the entire MIRVed Soviet SLBM force and deployment of much better nuclear-powered ballistic missile submarines (SSBNs). The major changes, as shown in figure 3, include:

— Deployment of additional SSBNs. We have evidence that five to seven new SSBNs of the Typhoon and Delta types are under construction.

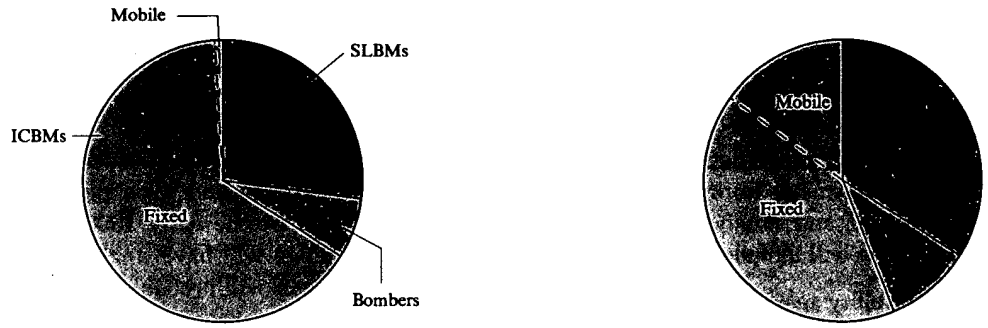
— Ongoing deployment of the new SS-N-23 SLBM on Delta-IVs and probably future deployments on Delta-IIIs. The increased range of the SS-N-23, relative to that of the SS-N-18 missile currently on Delta-IIIs, will make SS-N-23–equipped SSBNs more survivable.

— A replacement for the SS-N-20 on Typhoon SSBNs will probably be deployed between 1988

[1] *For an alternative view of the Director, Bureau of Intelligence and Research, Department of State, see paragraph 29.*

[2] *The holder of this view is the Director, Bureau of Intelligence and Research, Department of State.*

Figure 1
Soviet Intercontinental Attack Forces, Warhead Mix



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and 1990; and a new missile in the SS-N-23 class will probably be tested later in the 1980s.

— With long-range missiles, Typhoon and Delta SSBNs can operate under the Arctic ice or close to Soviet shores, where the Soviet Navy can better protect them. Soviet capabilities for more extensive operations in the Arctic are increasing.

Heavy Bombers

4. The Soviet heavy bomber force is undergoing its first major modernization since the 1960s; by the mid-1990s, as shown in figure 4, most of the older bombers will have been replaced. The heavy bomber force will have a somewhat greater role in intercontinental attack and greater diversity will have been added:

— Production continues for Bear H aircraft and AS-15 air-launched cruise missiles (ALCMs).

— We project the Blackjack will be operational in 1988, carrying both ALCMs and bombs. This aircraft will soon enter serial production.

Size of Intercontinental Attack Forces

5. The projected growth in the number of deployed warheads on Soviet intercontinental attack forces is shown in figure 5, page 12:

— The force currently consists of about 10,000 warheads on some 2,500 deployed ballistic missile launchers and heavy bombers. Most warheads are in the ICBM force.

— Warheads are increasing. Systems now being deployed—new Typhoon and Delta-IV submarines, Bear H bombers, and, soon, SS-X-24 ICBMs—carry many more warheads than the systems they are replacing.

— Force diversity is increasing. A growing proportion of Soviet intercontinental attack warheads will be deployed on SSBNs and mobile ICBMs, with a lower proportion in fixed silos.

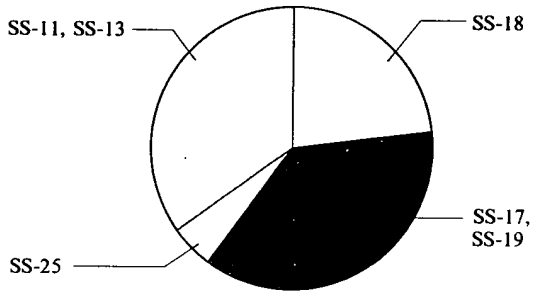
— If the Soviets continue to have about 2,500 ballistic missile launchers and heavy bombers and remain within the quantitative sublimits of SALT II, by 1990 the deployed warheads will grow to about 12,000; by 1995 probably over 14,000.

— While in the absence of an arms control process, the Soviets would not necessarily expand their intercontinental attack forces beyond these SALT II figures, they clearly have the capability for significant further expansion, to between 16,000 and 19,000 deployed warheads by 1995. The projection is lower by a few thousand warheads than last year's, and reflects further analy-

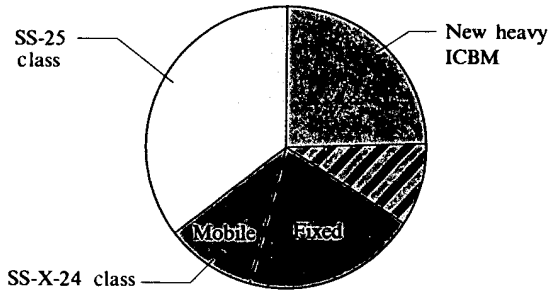
Figure 2
Modernization of Soviet ICBMs

Launchers

1986

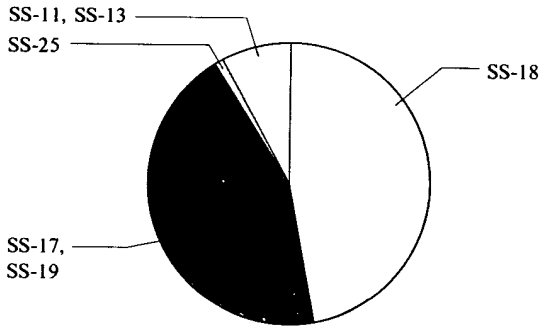


Mid-1990s

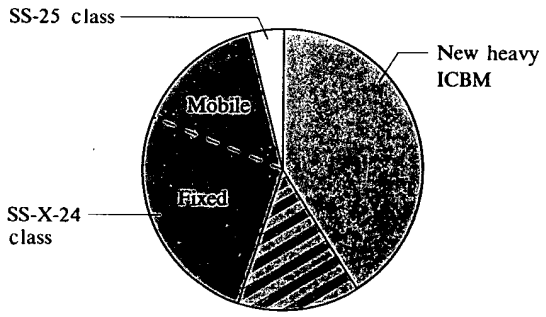


Warheads

1986



Mid-1990s

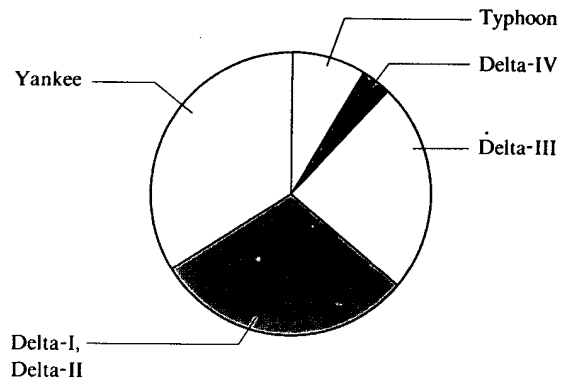


Uncertainty in extent of SS-X-24-class deployments. Some SS-19s might still be deployed.

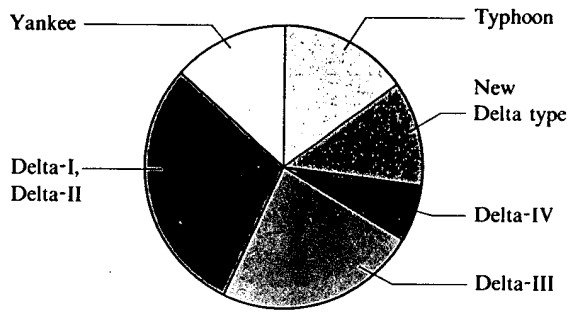
Figure 3
Modernization of Soviet SLBMs

Launchers

1986

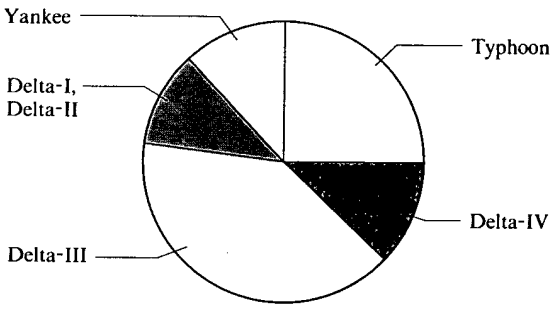


Mid-1990s

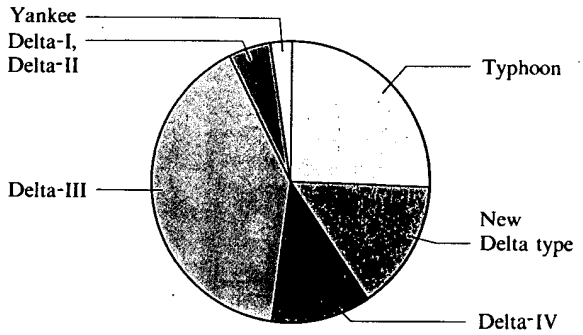


Warheads

1986



Mid-1990s



Note: Color change for Delta-III and Typhoon in the mid-1990s indicates new missiles deployed in existing submarine classes.

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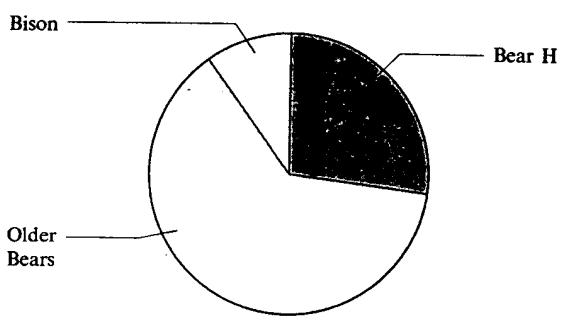
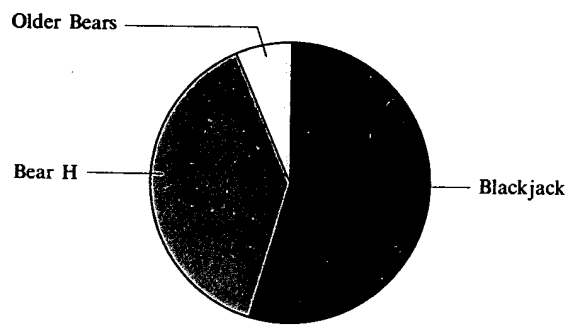
Figure 4
Modernization of Soviet Heavy Bombers

Heavy Bombers

1986

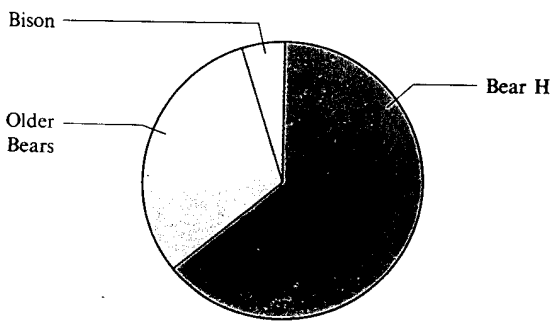


Mid-1990s



Weapons

1986



Mid-1990s

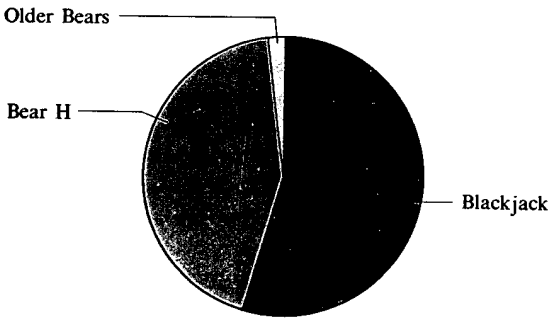
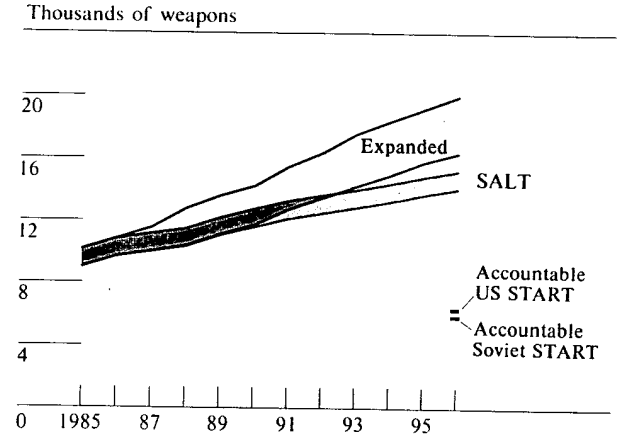


Figure 5
Projected Total Number of Deployed Soviet Warheads – ICBMs, SLBMs, and Heavy Bombers



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sis of Soviet requirements, programs, production capabilities, and nuclear materials constraints.

Some increase in the number of weapons beyond that figure is possible, primarily as a result of some reductions in projected tactical nuclear weapons or supplemental production of nuclear materials from other than existing military production facilities.

— Both the US and Soviet proposals at the strategic arms reduction talks (START) would result in a significant reduction from the current force size and have a major effect on the current and planned programs. These proposals, however, differ in major ways. We judge that the Soviets would be slow to drastically reduce the number of their heavy ICBMs, given the importance they attach to them and the unique counterforce capabilities of these weapons. Any willingness to make such reductions would depend on major US concessions, including concessions on the Strategic Defense Initiative (SDI), and a large reduction in US silo-based ICBMs.

6. Estimates of the number of warheads on various Soviet ballistic missiles are becoming more uncertain While there are differing views, we assess that the Soviets have deployed, and will continue to deploy, some missiles with more reentry vehicles (RVs) than the maximum number released in flight tests, and even more than the total of RVs actually released plus those simulated.

This problem is of current concern it will be a problem for future MIRVed ICBMs and SLBMs, The number of warheads actually deployed could be significantly greater than the accountable number in an arms control agreement.

8. The Soviets will face important decisions in the next few years as they proceed with flight-testing for ballistic missiles scheduled for deployment beginning in the late 1980s and early 1990s. Specifically, they will have to decide whether to test new ICBMs and SLBMs in such a way as to conform, or appear close to conforming, with limitations on characteristics and improvements from the unratified SALT II Treaty. They appear to have technical options for some of their new systems that will allow them to go either way.

Cruise Missiles

9. Over the next 10 years, we expect the Soviets to deploy large numbers of nuclear-armed ALCMs, sea-launched cruise missiles (SLCMs), and ground-launched cruise missiles (GLCMs); some of these will be supersonic. The deployment of cruise missiles provides the Soviets with new multidirectional, low- and high-altitude capabilities against US and Allied targets. Estimated numbers are highly uncertain, but we project an aggregate total of about 2,000 to 3,000.

SS-20s

10. In the absence of negotiated reductions, we expect the number of deployed SS-20–class missiles to change only slightly, if at all, from the current level. During 1985 the Soviets completed 11 new SS-20 bases, but they also deactivated others, mostly to convert to SS-25 ICBM bases. We have not identified any new bases under construction. An SS-20–class missile, with improved accuracy, is in flight-testing and is expected to begin replacing SS-20s in late 1986 or early 1987.

Strategic Defensive Forces

11. The Soviets will significantly improve the capabilities of their active and passive strategic defenses over the next 10 years, as a number of new types of weapons are introduced and many of the older systems retired. Significant developments in active strategic defenses include the following:

- The new Moscow antiballistic missile (ABM) defenses, which will be fully operational in 1988, will have 100 silo-based interceptors, providing an improved intercept capability against small-scale attacks on key targets around Moscow.
- The new large phased-array radar network, when fully operational at the end of the decade, will provide a much improved capability for ballistic missile early warning, attack assessment, and accurate target tracking. These radars will be technically capable of providing battle management support to a widespread ABM system, but there are uncertainties and differences of view about their suitability for battle management and whether the Soviets would rely on these radars to support a widespread ABM deployment.
- Deployment of new low-altitude-capable strategic air defense systems will increase. The Soviets are continuing to deploy the SA-10 all-altitude surface-to-air missile (SAM), have begun fielding a new mobile version, are deploying new aircraft with much better capabilities against low-flying targets, and will begin deploying the Mainstay airborne warning and control system (AWACS) aircraft during 1986.
- The mobile SA-X-12 system, to be deployed in the next few years, can engage conventional aircraft, cruise missiles, and tactical ballistic missiles. We are uncertain about its potential capabilities against strategic ballistic missiles. On the basis of a number of assumptions we conclude that it could have capabilities to intercept some types of US strategic ballistic missile RVs. Its technical capabilities bring to the forefront the problem that improving technology is blurring the distinction between air defense and ABM systems. This problem will be further complicated as newer, more complex air defense missile systems are developed. An alternative view holds that the SA-X-12 system has virtually no capability against modern strategic reentry vehicles.[5]

Ballistic Missile Defense

12. The Soviets are developing all the major components for an ABM system that could be used for widespread ABM defenses well in excess of ABM Treaty limits. The system consists of radars, an above-ground launcher, and the Gazelle missile that will be deployed at Moscow. The potential exists for the production lines associated with the upgrade of the Moscow ABM system to be used to support a widespread deployment. We judge the Soviets are capable of undertaking rapidly paced ABM deployments to strengthen the defenses at Moscow and cover key targets in the western USSR, and to extend protection to key targets east of the Urals by the late 1980s or early 1990s, assuming they have already begun making some of the necessary preparations.

13. We have reexamined our estimates of the likelihood that the Soviets would conduct such a widespread ABM deployment beginning in the 1980s, and we now conclude that it is unlikely that they will. (Roughly a 10-percent chance, as compared with a

[5] *The holder of this view is the Assistant Chief of Staff, Intelligence, Department of the Air Force.*

previously estimated 10- to 30-percent chance.) The Soviets probably perceive the near-term military benefits as outweighed by the long-term implications of US and Allied responses, particularly the prospects of a unified commitment to SDI. If the Soviets choose to deploy a widespread ABM system, we judge it is more likely that they will deploy, beginning in the early-to-middle 1990s, defenses based on a new generation of ABM equipment, than that they will soon begin to deploy defenses based on their current equipment. An alternative view holds that the probability of Soviet abrogation may be understated. According to this view, Soviet doctrinal requirements for damage-limiting capability have always provided a motivation to deploy ABMs both at Moscow and elsewhere. This view also holds that the likelihood of deployment is not contingent on the development of a new ABM system.[6]

Antisubmarine Warfare

14. The Soviets still lack effective means to locate US SSBNs at sea. We expect them to continue to pursue vigorously all ASW technologies as potential solutions to the problems of countering US SSBNs and defending their own SSBNs against US attack submarines. They have an energetic effort to develop a capability to remotely sense submarine-generated effects. Although we have improved our understanding of the nature of the Soviets' overall effort, there remain important uncertainties about the full extent and direction of their program.

15. We do not believe there is a realistic possibility that the Soviets will be able to deploy in the 1990s a system that could reliably monitor US SSBNs operating in the open ocean. There is a low-to-moderate probability that the Soviets could deploy in the mid-1990s an ASW remote detection system that would operate with some effectiveness if enemy nuclear-powered attack submarines (SSNs) approached ASW barriers near Soviet SSBN bastions.

Directed-Energy Weapons

16. There is strong evidence of Soviet efforts to develop high-energy laser weapons, although there are large uncertainties about the size and scope of the Soviets' research efforts in key technologies, as well as about the status and goals of their weapon development programs:

- We estimate the high-energy laser efforts we have been able to observe would cost roughly $1 billion per year if carried out in the United States.
- Two facilities at the Saryshagan test range are assessed to have high-energy lasers with the potential to function as antisatellite (ASAT) weapons.
- There is a large Soviet program to develop ground-based laser weapons for terminal defense against reentry vehicles. There are major uncertainties, however, concerning the feasibility and practicality of using ground-based lasers for ballistic missile defense and about when the Soviets might have such systems operational. We expect them to test the feasibility of such a system during the 1980s, probably using one of the high-energy laser facilities at Saryshagan. An operational system could not be deployed until many years later, probably not until after the year 2000, although a few such systems could conceivably be operational in the 1990s.
- The Soviets appear to be developing two high-energy laser weapons with potential strategic air defense applications—ground-based and naval point defense.
- The Soviets are continuing to develop an airborne laser.
- Soviet research includes a project to develop high-energy laser weapons for use in space. We estimate there is an even chance that a prototype high-energy, space-based laser ASAT weapon will be tested in low orbit in the early 1990s. Even if testing were successful, such a system probably could not be operational before the mid-1990s. An alternative view holds there is only a low probability of such tests by the early 1990s.[7]

17. The Soviets are also conducting research under military sponsorship for the purpose of acquiring the ability to develop particle beam weapons (PBWs), but the size and scope of this effort are unknown. We believe the Soviets will eventually attempt to build a space-based PBW, but we estimate there is only a low probability they will test a prototype before the year 2000.

18. We have no recent information on any Soviet program to develop radiofrequency (RF) weapons to destroy the electronics of a target. The Soviets are strong in the appropriate technologies, however, and

[6] *The holder of this view is the Director, Defense Intelligence Agency.*

[7] *The holders of this view are the Assistant Chief of Staff for Intelligence, Department of the Army; Director, Bureau of Intelligence and Research, Department of State; and the Deputy Assistant Secretary for Intelligence, Department of Energy.*

we judge they are capable of developing a prototype RF weapon system.

19. Since 1981 the Soviets have been constructing a large facility on top of a mountain near Dushanbe in the southernmost area of the USSR. a directed-energy weapon function—either a laser or possibly a radiofrequency ASAT weapon—seems most consistent with the available evidence. A somewhat less likely, but still plausible, function is deep space surveillance and/or space object identification.

Resources and Arms Control

20. While the Soviets are attempting a major restructuring of their industrial production capability, we do not believe that economic considerations alone would lead them to abandon major strategic weapon programs, to forsake force modernization goals, or to make substantial concessions in arms control. In recent years they made major resource commitments to emerging new systems, particularly costly mobile missile systems. Soviet force decisions and arms control decisions are likely to continue to be driven primarily by calculations of political-strategic benefits and the dynamism of weapons technology. We believe, however, that, as a result of the stark economic realities, decisions involving the rate of strategic force modernization probably will be influenced by economic factors more now than in the past and some deployment programs could be stretched out. Major new initiatives would involve difficult trade-offs; in particular, if the Soviets decided to expand their ABM defenses far beyond the 100-launcher treaty limit, they might be compelled to alter some of their other nonstrategic military modernization efforts, or to stretch out the ABM deployments somewhat. We judge, however, that strategic forces will continue to command the highest resource priorities and therefore would be affected less by economic problems than any other element of the Soviet military, although there are indications of an increased Soviet emphasis on conventional forces, using more advanced technology.

21. Soviet leaders view arms control policy as an important factor in preserving past strategic gains and achieving further strategic advantages. Moscow has long believed that arms control must first and foremost protect the capabilities of Soviet military forces relative to their opponents. The Soviets seek to limit US force modernization through both the arms control process and any resulting agreements. They will try to use the arms control arena as a means of slowing various US strategic programs and delaying or undercutting the US SDI program. In their view, SDI could force them to redirect their offensive ballistic missile development programs to reduce vulnerabilities and could stimulate a costly, open-ended high-technology competition in which, they apparently believe, the United States could outpace their own ongoing efforts.

Soviet Scenarios for Nuclear War

22. Soviet military planning is guided by fundamental wartime objectives: to decisively defeat enemy conventional and nuclear forces, occupy enemy territory in the theater, and defend the homeland against enemy attack. To meet these objectives, the Soviets train their forces for a global nuclear conflict. This training has diversified in scope and become increasingly complex in the operational factors with which it deals.

23. The Soviets apparently believe that a major nuclear conflict, if it occurred, would be likely to arise out of a NATO–Warsaw Pact conventional conflict preceded by a political crisis period that could last several weeks or longer. They perceive a conventional phase as lasting from a few days to as long as several weeks. The Soviets see little likelihood that the United States would initiate a surprise nuclear attack from a normal peacetime posture; we judge it is unlikely that they would mount such an attack themselves. Their key objectives in the conventional phase would be to weaken the enemy's theater-based and sea-based nuclear forces with attacks by conventional weapons, while protecting their own nuclear forces. We estimate there is a high likelihood that the Soviets would attempt to interfere with selected US space systems that provide important wartime support, using both destructive and nondestructive means. (However, the Soviets' growing reliance on space assets for the conduct of military operations is likely to pose a dilemma if better US antisatellite capabilities emerge.) They believe elements of their strategic forces would suffer losses during conventional conflict.

24. The Soviets are unlikely to initiate nuclear use in a theater conflict unless they perceived that NATO was about to use nuclear weapons, because they would probably see it as being to their advantage instead to keep the conflict at the conventional level. The Soviets would probably see an initial localized use of nuclear weapons as still leaving an opportunity to avoid large-scale nuclear war. However, once large-scale use of nuclear weapons in the theater occurred, imminent Soviet escalation to intercontinental nuclear war would be likely.

25. As the likelihood of large-scale nuclear conflict increased, Soviet leaders would face the difficult decision of whether to seize the initiative and strike, as would be consistent with their general military doctrine, or to be more cautious in the hope of averting large-scale nuclear strikes on the Soviet homeland. There are no easy prescriptions for what the Soviets would actually do under a particular set of circumstances, despite the apparent doctrinal imperative to mount large-scale preemptive nuclear attacks.

26. In intercontinental strikes the Soviets would seek to neutralize US and Allied military operations and capabilities—to destroy US-based nuclear forces, to disrupt and destroy the supporting infrastructure and control systems for these forces as well as the National Command Authority, and to attempt to isolate the United States from the theater campaign by attacking its power projection capabilities. They probably would also attempt to reduce US military power in the long term by attacking other nonnuclear forces, US military-industrial capacity, and governmental control facilities, although the extent of the attack on these targets in the initial strikes could vary, depending on the circumstances. It is highly unlikely that the Soviets would limit initial intercontinental strikes only to a "decapitation" attack against command, control, and communications targets, or only to a portion of US strategic forces, such as ICBM silos.

27. The Soviets, following the initial large-scale nuclear strikes, plan to reconstitute some surviving general purpose and strategic forces and to occupy substantial areas of Western Europe, while neutralizing the ability of US and Allied nuclear forces to interfere with these objectives. The Soviets would clearly prefer to accomplish their objectives quickly, but recognize that the later phases could be protracted, given the size and power of the contending coalitions, as well as the difficulty and complexity of conducting operations following large-scale nuclear strikes. They prepare for combat operations that could extend weeks beyond an initial nuclear phase.

28. As force modernization proceeds, the Soviets will continue to rely primarily on silo-based ICBMs for use in initial strikes, while withholding many of their SLBMs and presumably most of their dispersed mobile ICBMs for subsequent strikes during later phases of nuclear conflict. They also would attempt to reload and refire some ICBMs, many SS-20s, and probably some SLBMs, using reserve missiles and equipment. Taking into account the problems the Soviets are likely to face in a postattack environment and the apparently limited extent of preparations they have undertaken to cope with these difficulties, we estimate they probably would be able to reload and refire from silos over a period of weeks or months only a small portion of the reserve ICBMs they maintain in peacetime. The deployment of mobile ICBMs will lead to improved capabilities for ICBM reload.

29. There is an alternative view that the main text overstates the difficulties the Soviets would have in reconstituting their current silo-based ICBM force in nuclear conflict, given the extensive preparations this view holds they have made, and that consequently they would be able to refire a large portion of their reserve ICBMs.[10] According to another alternative view, the Soviets do not include ICBM, SLBM, and SS-20 reload and refire in their war plans. However, the Soviets probably would, in this view, attempt to reload a few launchers on a contingency basis, if any reserve missiles not required to maintain the online force were available. According to this view, a Soviet requirement for additional warheads would be better met by deployment of additional missiles on launchers. Furthermore, in this view, it is by no means clear that reload and refire operations during nuclear war would be less problematic for mobile launchers than for silos.[11]

Capabilities of Strategic Forces

30. The Soviets have enough hard-target-capable ICBM RVs today to attack all US missile silos and launch control centers with at least two warheads each. Our estimate of the expected damage to a US Minuteman silo from two Soviet SS-18 warheads is about 65 to 75 percent. (There is some additional uncertainty because we cannot precisely estimate the accuracy and yield of Soviet warheads.) The projected accuracy improvements for the new heavy ICBM we expect the Soviets to deploy in the late 1980s would

[10] *The holder of this view is the Director, Defense Intelligence Agency.*

[11] *The holder of this view is the Director, Bureau of Intelligence and Research, Department of State.*

result in a substantial increase in damage capability, with a best estimate around 85 to 90 percent. Our analysis suggests that the Soviets, although they have views different from those of the United States about the pertinent nuclear effects and best attack modes against silos, probably have a similar perception of their effectiveness in attacking a Minuteman silo.

31. Over the next 10 years, Soviet offensive forces will not be able to reliably target and destroy patroling US SSBNs, alert aircraft, aircraft in flight, or dispersed land-mobile missiles, particularly those beyond the range of tactical reconnaissance systems. We believe that, in a crisis or conflict, the Soviets would credit undegraded US warning and control systems with the ability to launch ICBMs on tactical warning.

32. Dispersed Soviet mobile missiles, many SSBNs patrolling in waters near the USSR, and a large part of the silo-based ICBM force would survive an attack by current US forces. The Soviets, however, probably perceive their ICBM silos to be somewhat more vulnerable to a US attack than we would assess, given their differing views of nuclear effects and likely attack modes, With the increasing vulnerability of Soviet ICBM silos during the period of this Estimate if more accurate US missiles are deployed, the Soviets will be faced with more difficult problems in assuring adequate retaliatory capabilities in their critical planning scenario in which they are struck first. The Soviets will continue to rely on silo-based ICBMs for the bulk of their preemptive attack capabilities. We have seen no evidence of a program to significantly increase the hardness of their missile silos; our analysis suggests the Soviets are unlikely to see much advantage in superhardening. They will increasingly depend on their mobile ICBM and SLBM forces for their retaliatory capabilities. We also judge that the Soviets can launch ICBMs on tactical warning, assuming their warning and command and control systems were undegraded.

33. Current Soviet ASAT capabilities could not deny enemy use of space in time of war, but Soviet ASAT systems could attack a number of key US satellites. In addition to the dedicated nonnuclear orbital interceptor, other systems—the nuclear Galosh ABM interceptor and two ground-based high-energy lasers—have the potential to destroy or interfere with some satellites in near-Earth orbit; these capabilities, however, would not survive a nuclear attack. Electronic warfare currently represents the only potential threat to unprotected satellites in higher orbits.

34. Because of recent analysis, we have a somewhat different picture of Soviet leadership protection than was shown in last year's Estimate. We now estimate the total number of exurban facilities supporting the Soviet wartime leadership to be over 1,000, somewhat lower than last year's figure. Of this number, we assess about 300 as being vital to supporting Soviet warfighting operations;

35. The Soviets' commitment to their deep underground program is greater than we previously estimated. We now have a better understanding of the fact that, over the last 35 years, they have constructed an enormous system of deep underground facilities, perhaps several hundred meters beneath the Moscow urban area, interconnected both by the public metro system and dedicated VIP metro lines leading to the Vnukovo Airfield VIP terminal, the Chekhov and Sharapovo deep underground complexes, and probably the Chernoye air defense complex. Access to the Moscow underground complex is available from each of the major state and party institutional headquarters, including the Kremlin, KGB Headquarters, and the facilities of the Central Committee. Similar subway-related deep underground facilities have been confirmed in Leningrad, Kiev, and Baku, These deep underground facilities present a difficult targeting problem for US planners.

36. Sufficient warning to implement relocation plans would allow survival of a large percentage of the Soviet leadership, mostly at lower territorial levels. However, the Soviet wartime management system would be seriously disrupted, with major degradation or denial of many national-level leadership functions associated with the Moscow area. Damage would also be pronounced at the intermediate level, affecting military districts (and regional military high commands) as well as the leadership of the Soviet republics.

37. Any judgment about the overall effectiveness of the future Soviet air defenses against an attack by bombers and cruise missiles is subject to considerable uncertainty. Penetration of improved Soviet air defenses by currently deployed bombers would be more difficult. These defenses, however, would be consider-

ably less effective against US cruise missiles and future bombers. Our judgment is that, against a combined attack of penetrating bombers, short-range attack missiles (SRAMs), and cruise missiles, Soviet air defenses during the next 10 years probably would not be capable of inflicting sufficient losses to prevent considerable penetration of Soviet air defenses. These judgments, however, are highly dependent on the effectiveness of US electronic countermeasures and the penetration altitudes of US bombers and cruise missiles.

38. There is an alternative view that this Estimate substantially understates the capability of the Soviet air defense system to defend key target areas against low-altitude penetrators. The holder of this view believes that the effectiveness in such areas would be significantly higher against a combined attack of penetrating bombers, SRAMs, and cruise missiles than the Estimate suggests.[12]

39. While significant improvements in the capabilities of both Soviet and US strategic offensive forces will occur throughout the next 10 years, sizable forces on both sides would survive large-scale nuclear strikes. It seems highly likely that the Soviets could maintain overall continuity of command and control, although it would probably be degraded. The Soviets could experience difficulty in maintaining endurance and effectiveness for weeks of continuing operations, particularly if subjected to US strikes. Soviet long-range reconnaissance capabilities could be particularly affected. We believe the Soviets would launch continuing attacks on US and Allied strategic command, control, and communications to prevent or impair the coordination of retaliatory strikes, thereby easing the burden on Soviet strategic defenses, and impairing US and Allied abilities to marshal military and civilian resources to reconstitute forces.

Concluding Observations

40. The evidence shows clearly that Soviet leaders are preparing their military forces for the possibility that they will actually have to fight a nuclear war. They have seriously addressed many of the problems of conducting military operations in a nuclear war, and are training for increasingly complex conflict situations, thereby improving their ability to deal with the many contingencies of such a conflict. We judge that the Soviets would plan to conduct a military campaign that would seek to end a nuclear war on their terms—by neutralizing the ability of US intercontinental and theater nuclear forces to interfere with Soviet capabilities to defeat adversary forces in Eurasia and dominate that area, while preserving the ability of the Soviet state to survive and recover. We do not have specific evidence on how the Soviets would assess their prospects for prevailing in a global nuclear conflict, but, because their perspective is different from ours, their conclusions as to comparative advantages may also be very different from our own:

— Their persistence in enhancing their strategic offensive and defensive capabilities is pursued not with the expectation that they would avert widespread disaster in all circumstances, but rather in a belief that, if nuclear strikes took place, sizable forces would be likely to survive on both sides, the war might well continue, and they should be prepared to pursue an outcome as favorable as possible.

— The Soviet view of nuclear strategy holds that challenges to Soviet interests become less likely as the Soviet Union is better prepared to fight in various contingencies. This approach is designed to realize Soviet geopolitical objectives through coercion, if possible, and to emerge as the dominant power should war nevertheless occur.

— While the Soviets emphasize the military value of preemption as a means of reducing damage, they also evaluate the capabilities of strategic forces to accomplish missions under unfavorable conditions, such as having to launch from under attack or after absorbing an attack. Soviet planning also has emphasized the adequacy of strategic forces to fulfill missions after a phase of nonnuclear theater war during which strategic assets might have suffered losses.

41. A Soviet planner's judgments are likely to be strongly shaped both by his appreciation of the persistent possibility of nuclear war and by his sensitivity to the stringent requirements for waging it effectively—by limiting damage to the homeland and pursuing wide-ranging combat objectives against the United States and in continental theaters on the periphery of the USSR. Thus he operates in a planning environment which typically has placed a high priority on such capabilities as:

— Passive defenses, as well as active defenses and massive initial strikes on enemy ICBMs, to limit damage.

[12] *The holder of this view is the Assistant Chief of Staff for Intelligence, Department of the Army.*

— Highly redundant command, control, communications, and intelligence capabilities and extensive leadership protection measures to assure continuity of control of the war effort.

— Various command, control, communications, and intelligence capabilities and other measures to assure the integration and coordination of the disparate strategic and other force elements that would prosecute the war both at the intercontinental level and in Eurasian theaters.

— In general, preparations for more extended operations beyond the initial nuclear strikes.

42. As a result of such different and, in some ways, more demanding requirements, as compared with traditional US requirements, the Soviets are likely to rate their capabilities as lower in some areas than we would assess them to be. They clearly are concerned about:

— The vulnerability of their submarines to US ASW, particularly in view of the reserve mission they assign to a part of their SSBN force.

— The impact of ongoing and potential US strategic programs.

— The increased probability that US improvements in command, control, communications, and intelligence will enable the United States to retaliate more effectively and to manage forces more efficiently in at least the initial stage of a nuclear war.

— Their own ability to maintain effective command, control, communications, and intelligence connectivity throughout key phases of crisis or war.

— Their inability to prevent the United States from launching a counterstrike. We judge that the Soviets would anticipate that a large force of US and Allied weapons—alert bombers, patrolling SSBNs, and at least a small number of ICBMs—could survive a major massed strike. Moreover, the Soviets could not be confident that the United States would not be capable of launching the ICBM force on tactical warning or under attack. The Soviets are also well aware of their inability to prevent massive damage to the USSR with their strategic defenses even with the improvements taking place in these forces. They also recognize that US strategic defenses cannot prevent massive damage.

43. We conclude that the Soviets' calculations of their chances for success in any nuclear conflict would occur against a backdrop of fundamental uncertainty. They recognize the uncertainties inherent in many of the factors upon which their success in nuclear war would depend. They do not know some factors with precision and others are unknowable in advance of war itself. We judge, therefore, that the Soviets would not have high confidence in the capability of their strategic offensive and defensive forces to accomplish their wartime missions, particularly limiting the extent of damage to the Soviet homeland. The Soviets' lack of high confidence and their appreciation of the destructiveness inherent in nuclear conflict would probably inhibit them in peacetime from deliberately risking a direct clash with the United States or its NATO Allies. Avoiding further escalation, however, would not be their sole concern should they get involved in a major conventional war with the United States and its Allies. In these circumstances—where they would expect the risks of nuclear war to be high—they would also consider that, by failing to seize the initiative should all-out nuclear war appear imminent and unavoidable, the Soviets could suffer both greater damage and a reduction in their chances for eventual combat success. The likelihood of their initiation of nuclear strikes would increase if they suffered a major strategic reversal on the battlefield. If the Soviets possessed convincing evidence that NATO or the United States was about to launch a large-scale nuclear strike, they would attempt to preempt.

44. We cannot fully determine the operational considerations that would sway the Soviets' judgments on whether to risk nuclear war in the various circumstances where they might face such a decision over the next decade. We note, in general, that, despite extensive deployments of mobile ICBMs and other projected measures to enhance the survivability of their forces, we expect them to deploy new silo-based heavy ICBMs that probably will be both more capable against US hard targets and more vulnerable themselves to a US countersilo attack in the 1990s. The Soviets' strategic programs suggest that, while improving their prospects for riding out an attack, they still will have incentives to rely on the employment options of preemption and launching on tactical warning—options that are consistent with their longstanding strategic outlook. Their willingness to rely on these options, in short, attests to their continued concern to maximize their combat advantages—or at least minimize those of the United States—in the event of nuclear war.

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